

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 19

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte PIETER VUYLSTEKE

Appeal No. 1999-0490
Application 08/335,917

ON BRIEF

Before THOMAS, KRASS and JERRY SMITH, Administrative Patent Judges.

JERRY SMITH, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on the appeal under 35 U.S.C. § 134 from the examiner's rejection of claims 1-16, which constitute all the claims in the application.

The disclosed invention pertains to a method for processing an image in a radiographic imaging system in which an electric signal representation of the image is mapped to

density values for visualization of the image. The invention is particularly directed to the manner in which the density of low density areas in a diagnostically irrelevant zone in the image are enhanced.

Representative claim 1 is reproduced as follows:

A method of processing an image in a radiographic imaging system wherein an electric signal representation of said image is mapped to density values for visualization as a hard or a soft copy image characterized in that the density of low density area in a diagnostically irrelevant zone in the image is enhanced and image structure in said zone is kept visible, by converting in said diagnostically irrelevant zone of the image pixels located at position (x,y) according to a conversion function $g(x,y) = a.f(x,y) + (1-a).f_{\max}$ wherein $f(x,y)$ is the signal value before conversion of a pixel located at position (x,y), a is a value between zero and one, and f_{\max} is equal to the maximum of values $f(x,y)$, prior to being subjected to mapping into density values.

The examiner relies on the following references:

Steele et al. (Steele)	4,803,639	Feb. 07, 1989
Vuylsteke et al. (Vuylsteke)	5,467,404	Nov. 14, 1995
		(filed Aug. 03, 1992)

Claims 1-16 stand rejected under 35 U.S.C. § 103. As evidence of obviousness the examiner offers Vuylsteke in view of Steele.

Rather than repeat the arguments of appellant or the examiner, we make reference to the briefs and the answer for

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the respective details thereof.

OPINION

We have carefully considered the subject matter on appeal, the rejection advanced by the examiner and the evidence of obviousness relied upon by the examiner as support for the rejection. We have, likewise, reviewed and taken into consideration, in reaching our decision, the appellant's arguments set forth in the briefs along with the examiner's rationale in support of the rejection and arguments in rebuttal set forth in the examiner's answer.

It is our view, after consideration of the record before us, that the evidence relied upon and the level of skill in the particular art would not have suggested to one of ordinary skill in the art the obviousness of the invention as set forth in claims 1-16. Accordingly, we reverse.

In rejecting claims under 35 U.S.C. § 103, it is incumbent upon the examiner to establish a factual basis to support the legal conclusion of obviousness. See In re Fine, 837 F.2d 1071, 1073, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). In

so doing, the examiner is expected to make the factual determinations set forth in Graham v. John Deere Co., 383 U.S. 1, 17, 148 USPQ 459, 467 (1966), and to provide a reason why one having ordinary skill in the pertinent art would have been led to modify the prior art or to combine prior art references to arrive at the claimed invention. Such reason must stem from some teaching, suggestion or implication in the prior art as a whole or knowledge generally available to one having ordinary skill in the art. Uniroyal, Inc. v. Rudkin-Wiley Corp., 837 F.2d 1044, 1051, 5 USPQ2d 1434, 1438 (Fed. Cir.), cert. denied, 488 U.S. 825 (1988); Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281, 293, 227 USPQ 657, 664 (Fed. Cir. 1985), cert. denied, 475 U.S. 1017 (1986); ACS Hosp. Sys., Inc. v. Montefiore Hosp., 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984). These showings by the examiner are an essential part of complying with the burden of presenting a prima facie case of obviousness. Note In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). If that burden is met, the burden then shifts to the applicant to overcome the prima facie case with argument and/or evidence. Obviousness is then determined on the basis

of the evidence as a whole and the relative persuasiveness of the arguments. See Id.; In re Hedges, 783 F.2d 1038, 1039, 228 USPQ 685, 686 (Fed. Cir. 1986); In re Piasecki, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984); and In re Rinehart, 531 F.2d 1048, 1052, 189 USPQ 143, 147 (CCPA 1976). Only those arguments actually made by appellant have been considered in this decision. Arguments which appellant could have made but chose not to make in the brief have not been considered [see 37 CFR § 1.192(a)].

With respect to each of independent claims 1-3, the examiner has indicated how she has reached the conclusion of obviousness [answer, pages 3-4]. Appellant argues that the examiner has ignored the conversion function recited in each of claims 1-3 [brief, pages 4-5]. The examiner indicates that the formula disclosed in Vuylsteke at column 9, lines 2-28 is equivalent to the claimed function if the parameters in the reference are given specific definitions [answer, page 4]. Appellant responds that the examiner's formula does not equate to the claimed formula and the definitions given by the examiner are improper [reply brief].

We will not sustain the examiner's rejection of the

claimed invention because the examiner has failed to establish a prima facie case of obviousness. Appellants are correct that the conversion formula in Vuylsteke is not the same as the claimed conversion formula. Not only does the examiner's formula fail to equate to the claimed formula, but the examiner's definitions of " y ", " x_{\max} " and " $(x/x_{\max})^{p_0}$ " make no sense when applied to the Vuylsteke disclosure. There is clearly no suggestion in Vuylsteke of defining the parameters of Vuylsteke's formula in the manner proposed by the examiner. Since the formula disclosed by Vuylsteke is not the same as the claimed formula, and since the examiner has not addressed the obviousness of the claimed formula in view of the Vuylsteke disclosure, the examiner has failed to establish a prima facie case of obviousness.

In view of the discussion above, we do not sustain the examiner's rejection of independent claims 1-3 or of claims 4-16 which depend from claim 1. Therefore, the decision of the examiner rejecting claims 1-16 is reversed.

REVERSED

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	JAMES D. THOMAS)	
	Administrative Patent Judge)	
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	ERROL A. KRASS)	BOARD OF
PATENT	Administrative Patent Judge)	APPEALS AND
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